

**CLAIMS:-**

1. An overflow launder for a separation cell of the type wherein particles rise to the surface of the fluid in the cell and overflow into the launder, including:

one or more primary troughs located adjacent the surface of the fluid in the cell in

5 use; and

one or more secondary troughs extending in use across an upper portion of the fluid in the cell such that fluid containing particles overflows into the secondary troughs and drains along these troughs into one or more said primary troughs.

2. An overflow launder as claimed in claim 1 including an array of said secondary

10 troughs extending across the fluid surface.

3. An overflow launder as claimed in either claim 1 or claim 2 wherein each secondary trough has at least one elongate lip over which the particles overflow into the trough, the lips of each trough being substantially level with each other.

4. An overflow launder as claimed in claim 3 wherein each secondary trough has two  
15 said lips extending along opposite edges of the trough.

5. An overflow launder as claimed in any one of the preceding claims wherein one or more said secondary troughs extends across the cell from a primary trough on one side of the cell to a primary trough on the opposite side of the cell, such that in use fluid can drain from either end of said secondary trough into a primary trough.

20 6. An overflow launder as claimed in any one of the preceding claims wherein said secondary troughs include a raised internal portion at an intermediate position in the trough, causing fluid to drain to each end of the trough and into the primary trough.

7. An overflow launder as claimed in any one of the preceding claims wherein the secondary troughs are channels which are "v" shaped in cross-section.

8. An overflow launder as claimed in claim 7 wherein at least some of said "v" shaped channels include a false floor extending along said channel, the false floor being relatively higher in the centre region of said channel, forming said raised internal portion, and relatively lower toward each end of the trough.

5 9. An overflow launder as claimed in either claim 7 or claim 8 wherein the lips of each of the said "v" shaped channels comprising the said secondary troughs intersect the inclined plates in a Reflux Classifier or other inclined or vertical plate device.

10. An overflow launder as claimed in claim 9 wherein the inclined or vertical plates extend to a higher elevation than the lips of the secondary troughs, forcing all fluid and  
10 particles to report directly to the said secondary troughs.